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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,636	07/30/2003	Su-May Yu	08919-088001 13A-910410	4976
26161	7590	04/05/2006	EXAMINER BAUM, STUART F	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			ART UNIT 1638	PAPER NUMBER

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/630,636

**Applicant(s)**

YU, SU-MAY

**Examiner**

Stuart F. Baum

**Art Unit**

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-20, 22-35 and 42-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 17, 19, 22-28, 34-35, 42-45 is/are rejected.
- 7) ☒ Claim(s) 18, 20, 29-33, 44, 46 and 47 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The amendment filed 1/18/2006 has been entered.  
Claims 17-20, 22-35, and 42-47 are pending.  
Claims 1-16, 21, and 36-41 have been canceled.  
Claims 42-47 have been newly added and are drawn to the elected invention.
2. Claims 17-20, 22-35, and 42-47, including SEQ ID NO:1 encoding SEQ ID NO:7 are examined in the present office action.
3. Rejections and objections not set forth below are withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

***Claim Objection***

5. Claim 44 is objected to for reciting "wherein the wherein the". Correction is requested.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 42 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 42 recites the limitation "the method" in claim 20. There is insufficient antecedent basis for this limitation in the claim.

*Written Description*

7. Claims 17, 19, 22, 24-28 and 34-35 remain rejected and newly submitted claims 43 and 45 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is maintained for the reasons of record set forth in the Official action mailed 9/12/2005. Applicant's arguments filed 1/18/2006 have been fully considered but they are not persuasive.

Applicants contend that amended claim 17, is in line with the USPTO policy regarding the written description requirements published January 5, 2001 (page 8 or Remarks, 7<sup>th</sup> paragraph). Applicants contend amended claim 17 is analogous to Example 9 of the written description training material (paragraph bridging pages 8 and 9). Applicants contend that in the instant application, the stringent conditions taught in the specification are more stringent than those defined in Example 9 (page 9 or Remarks, 3<sup>rd</sup> full paragraph). Applicants contend, that claim 17 as written, encompasses nucleic acids that encode a protein that binds to a TATCCA sequence and encompasses a genus of nucleic acids that merely hybridize to SEQ ID NO:1 (page 9 or Remarks, footnote #1).

The Office contends that claim 17 is not analogous to Example 9 of the written description guideline training material. The fact pattern of Example 9 compared to the fact

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pattern associated with Applicants' claim 17 is not the same. The fact pattern of Example 9 is a DNA sequence of SEQ ID NO:1 that encodes a protein that binds to a dopamine receptor and stimulates adenylate cyclase activity. The complement of said sequence was used to isolate other nucleic acids under highly stringent conditions that were shown to encode proteins that bind to a dopamine receptor and stimulate adenylate cyclase activity. Applicants have only isolated one sequence, i.e., SEQ ID NO:1 and Applicants have not isolated other sequences using the specified stringent conditions. In addition, Applicants' claim 17 does not recite a specific molecular function that leads to a specific biochemical function or phenotypic change to the plant. Therefore, the claims are not analogous to Example 9 of the written description guideline training material and therefore, the written description requirements are not fulfilled for Applicants' claimed invention.

Re: claim 43 recites the limitation that the polypeptide binds to DNA containing one or more copies of a TATCCA sequence. The Office does not consider this an adequate functional limitation because Applicants disclose that various activities can occur after a myb transcription factor binds, i.e., activate or repress transcription. See page 6, lines 27-30.

### ***Scope of Enablement***

8. Claims 17, 19, 22, 24-28 and 34-35 remain rejected and newly submitted claims 43 and 45 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for SEQ ID NO:1 encoding SEQ ID NO:7 wherein SEQ ID NO:7 binds to a sugar response sequence (SRS) and effects transcription of a coding sequence operably linked to the SRS, does not reasonably provide enablement for nucleic acid sequences that comprises a

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sequence of at least 500 bases and hybridize to SEQ ID NO:1 or the complement thereof, or wherein the sequence encodes an amino acid sequence at least 95% identical to SEQ ID NO:7; and plant or cell transformation therewith and method comprising said nucleic acid sequence. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims. This rejection is maintained for the reasons of record set forth in the Official action mailed 9/12/2005. Applicant's arguments filed 1/18/2006 have been fully considered but they are not persuasive.

Applicants contend at the time of filing, hybridization technologies were known and the covered genus is predictably quite narrow (page 10 or Remarks, 3<sup>rd</sup> paragraph).

The Office contends that the claimed genus includes a multitude of sequences; many of which would encode proteins not having the same activity as Applicants' SEQ ID NO:7. The state-of-the-art teaches unpredictability as stated in the office action mailed 9/12/2005, and therefore undue trial and error experimentation would be required by one of skill in the art to practice the claimed invention.

Applicants contend that the specification teaches how to make or isolate the claimed invention (page 11 of Remarks, 2<sup>nd</sup> paragraph).

The Office acknowledges that Applicants' specification does teach how to isolate SEQ ID NO:1. But, the Office contends that Applicants' claims are broadly drawn to a multitude of sequences which Applicants have not disclosed, or have not taught how to make or isolate. The Office contends that Applicants' claims are drawn to sequences that do not necessarily encode SEQ ID NO:7, or encode any protein for that matter. Applicants' claim 17 does not recite any

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biological and/or molecular function, as for example, that is stated in Example 9 of the written description guidelines. Therefore, given the breadth of the claims; the lack of guidance and examples; the unpredictability in the art; and the state-of-the-art as discussed in the office action mailed 9/12/2005, undue experimentation would be required to practice the claimed invention, and therefore the invention is not enabled.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 22-23, and 34 are rejected under 35 USC 101 because the claimed invention is directed to non-statutory subject matter.

The claim recites "A cell comprising" or "a cell", which reads on a human being.

Amending the claim to recite "An isolated cell" will obviate the rejection.

10. Claims 17-20, 22-35, and 42-47 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest an isolated nucleic acid comprising at least 500 bases, the sequence hybridizing under stringent condition (i.e., hybridization at 65°C, 0.5 X SSC, followed by washing at 45°C, 0.1 X SSC, see page 5, lines 14-15), or wherein the nucleic acid encodes a protein exhibiting 95% identity to SEQ ID NO:7, or wherein the nucleic acid comprises SEQ ID NO:1 encoding SEQ ID NO:7; and method, isolated cell and plant comprising said nucleic acid.

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11. Claims 18, 20, 29-33, 44, and 46-47 are objected to as being dependent upon a rejected or objected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached at 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Stuart F. Baum Ph.D.  
Patent Examiner  
Art Unit 1638  
March 20, 2006



STUART F. BAUM, PH.D.  
PATENT EXAMINER